

Application No.: 09/768,857

Docket No.: KAMMON 3.0-073

LISTING OF CLAIMS

1. (original) A flow rate measuring apparatus comprising:
an ultrasonic transmission section for transmitting an ultrasonic wave to fluid flowing in a flow passage;
an ultrasonic receiving section for receiving an ultrasonic wave which has propagated through the fluid;
a transmission timing control section constructed so as to permit said ultrasonic transmission section to transmit an ultrasonic wave in accordance with a plurality of transmission modes different in transmission timing from each other; and

a flow rate operation section for calculating a flow rate of the fluid on the basis of an output signal of said ultrasonic receiving section.
2. (original) A flow rate measuring apparatus as defined in claim 1, further comprising a transmission mode selection section for carrying out change-over among said transmission modes based on a result of the calculation by said flow rate operation section.
3. (original) A flow rate measuring apparatus as defined in claim 1, wherein said transmission modes include:
a first transmission mode which permits an ultrasonic wave to be transmitted at a predetermined timing for every period of a flow waveform of the fluid; and
a second transmission mode which permits an ultrasonic wave to be transmitted at a timing shifted by a predetermined time for every period of the flow waveform of the fluid.
4. (original) A flow rate measuring apparatus as defined in claim 2, wherein said transmission modes include:

Application No.: 09/768,857

Docket No.: KAMMON 3.0-073

a first transmission mode which permits an ultrasonic wave to be transmitted at a predetermined timing for every period 30 of a flow waveform of the fluid; and

a second transmission mode which permits an ultrasonic wave to be transmitted at a timing shifted by a predetermined time for every period of the flow waveform of the fluid.

5. (original) A flow rate measuring apparatus as defined in claim 3, wherein said transmission modes further include a third transmission mode which permits an ultrasonic wave to be transmitted at predetermined intervals.

6. (original) A flow rate measuring apparatus as defined in claim 4, wherein said transmission modes further include a third transmission mode which permits an ultrasonic wave to be transmitted at predetermined intervals.

7. (original) A flow rate measuring apparatus as defined in claim 4, further comprising a transmission timing setting section for resetting a transmission timing of said first transmission mode in accordance with a result of the calculation by said flow rate operation section;

said transmission mode selection section carrying out change-over from said second transmission mode to said first transmission mode thus reset.

8. (original) A flow rate measuring apparatus as defined in claim 6, further comprising a transmission timing setting section for resetting a transmission timing of said first transmission mode in accordance with a result of the calculation by said flow rate operation section;

said transmission mode selection section carrying out

Application No.: 09/768,857

Docket No.: KAMMON 3.0-073

change-over from said second transmission mode to said first transmission mode thus reset.

9. (original) A flow rate measuring apparatus as defined in claim 6, further comprising a flow rate variation judging section for judging whether or not a variation in flow rate is reduced based on a result of the calculation by said flow rate operation section;

said transmission mode selection section carrying out change-over from said first or second transmission mode to said third transmission mode when a variation in flow rate is reduced.

10. (original) A flow rate measuring apparatus as defined in claim 8, further comprising a flow rate variation judging section for judging whether or not a variation in flow rate is reduced based on a result of the calculation by said flow rate operation section;

said transmission mode selection section carrying out change-over from said first or second transmission mode to said third transmission mode when a variation in flow rate is reduced.

11. (canceled)

12. (canceled)

13. (canceled)

14. (canceled)

15. (canceled)

Application No.: 09/768,857

Docket No.: KAMMON 3.0-073

16. (canceled)

17. (previously presented) A flow rate measuring apparatus as defined in claim 1, wherein said transmission modes include a transmission mode which permits an ultrasonic wave to be transmitted at a predetermined timing for every period of flow waveform of the fluid.

18. (previously presented) A flow rate measuring apparatus as defined in claim 1, wherein said transmission modes include a transmission mode which permits an ultrasonic wave to be transmitted at a timing shifted by a predetermined time for every period of flow waveform of the fluid.